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## Arrhythmias

### INCIDENCE OF ARRHYTHMIAS AND PROGNOSTIC SIGNIFICANCE OF QT PROLONGATION IN PATIENTS WITH STRESS CARDIOMYOPATHY

Moderated Poster Contributions

Poster Sessions, Expo North

Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

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Session Title: Arrhythmias: Utility of ECG for Patients at Risk of SCD

Abstract Category: 6. Arrhythmias: Other

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**Background:** Stress cardiomyopathy (SCMP) is characterized by reversible apical ventricular dysfunction with no obstructive CAD on angiography. ECG changes include ST segment elevation with anterior T wave inversion and prolonged QT. The association of prolonged QT and SCMP is known, but there is discrepancy about the incidence of ventricular arrhythmias including torsades. We sought to determine the incidence of arrhythmias and assess the prognostic importance of QTc in a large database of SCMP patients.

**Methods:** We reviewed the records of 80 patients with SCMP at Danbury Hospital from 2005-2012. We evaluated clinical characteristics, ECGs at presentation, and all arrhythmias. We also assessed QT interval prior to diagnosis and at follow up.

**Results:** 90.1% were female with mean age of 66.7. Mean QTc at baseline was 427 msec. ECG within 12-24 hours of diagnosis had a mean QTc of 496 msec (405-627). 36 had QTc above 500 msec. 86% of males had QTc < 500 msec. Seven had normal QTc defined as <440 msec. Six developed new onset atrial fibrillation/flutter at presentation (8.75%). In patients with new onset atrial fibrillation, the mean age was 74 with a mean QTc of 522.3 msec. One patient had multifocal PVCs, one had AIVR, and one had ventricular bigeminy. One presented with complete heart block and had a pacemaker placed with the clinical course complicated by polymorphic ventricular tachycardia. One presented with cardiac arrest secondary to ventricular fibrillation. Mean QTc at follow up was 441.5 msec. There was no statistically significant difference between a QTc of < 500 msec versus > 500 msec in terms of length of stay (p value 0.87), EF (p value 0.86), and peak troponin (p value 0.2).

**Conclusions:** There was no prognostic significance of the degree of prolongation of QTc on morbidity as assessed by length of hospital stay, peak troponin, and EF. Atrial fibrillation was the most common arrhythmia in our study. This is the first study to report incidence of new onset atrial fibrillation in SCMP. Further examination of the prognostic impact of this arrhythmia in SCMP is warranted.